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REMARKS

1. Claim Amendments. Applicant has replaced the term "may be divided up"  
5 with the term "is distributed" in Claim 12, line 16.

Furthermore, and importantly, Applicant has reworded the last paragraph of  
Claim 12 to indicate what is done when a code word of the second set is  
distributed over more than one segment in accordance with the predetermined  
10 rule. Particularly, when this is the case, then only a part of the code word of the  
second set is found in a segment when all segments are searched for code  
words of the second set in accordance with the predetermined assignment rule.  
Claim 12, recites that there is a "predetermined assignment rule" and a  
predetermined rule. The searching for code words of the second set as indicated  
15 in the first three lines of the last paragraph of Claim 12 is done in accordance  
with the predetermined assignment rule, while, as stated before, the distribution  
of a code word of the second set over more than one segment is done in  
accordance with the predetermined rule. Thus, the last paragraph of Claim 12 is  
clearly directed to the situation in which a code word of the second set is not yet  
20 complete, but all segments have been searched in accordance with the  
predetermined assignment rule. This is clear from Fig. 4(a) and Fig. 4(b). When  
searching for code words of the second set in accordance with the  
predetermined assignment rule, as stated in the first three lines of the last  
paragraph of Claim 12, only a part of code word 7, *i.e.* code word 7a, is found in  
25 segment. However, this code word of the second set is still not complete. The  
first part 7a was in segment 1 and now, as is clear from Fig. 4, a second attempt  
is made, in which a rest of code word 7, *i.e.* code word portion 7b, is searched in  
segment 2. Segment 2 is different from segment 1. Segment 1 is the place for  
the first part of code word 7, and segment 2 is the place for the second part 7b of  
30 the code word 7 under consideration.

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The selection of the "further segment" in the claim language, *i.e.* segment 2, is different from segment 1, in which the first part 7a of the code word has been found is done in accordance with the predetermined rule, which is consistent with the definition in Claim 12, lines 16 and 17. Then, when one jumps into this further  
5 segment, one obtains the at least one code word of the second set completely or a further part of the at least one code word from the further segment.

Code word 7 is only divided over two segments. However, there can also be the case, in which a code word is separated over more than two segments, *i.e.* three  
10 segments, depending on the current situation.

Applicant has made the same amendments to the parallel decoding method of Claim 19.

15 2. Prior Art. The Examiner compares Fig. 9 to Claim 12. Furthermore, the Examiner asserts that the PSC signals of Nagai correspond to the Applicant's points. When one additionally assumes that Fig. 9 of Nagai discloses several subsequent frames, then each frame has a first code string written from left to right and a second code string written from right to left. Furthermore, the  
20 Examiner maintains that all first code strings correspond to code words of the first set, while all second code strings correspond to the code words of the second set. However, as can be seen from Fig. 9, there can never be the case in which a code word of the second set, *i.e.* a second code string in Fig. 9 of Nagai is distributed over more than one segment. This is due to the fact that the "raster  
25 points" in Nagai correspond to frame start indicators or "synchronization signals of succeeding frames." Thus, a portion of the second code string from the current frame cannot be written behind the synchronization signal of the succeeding frame. Stated differently, Nagai clearly excludes the case in which, for example,  $b_{2n}$  (which is the last portion of the second code string) is written behind the right  
30 PSC signal, which is termed as "synchronization signal of succeeding frame." This is clear from column 14, lines 58 to 60, which teaches that the code-row

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forming means forms two code strings with respect to the reordered regions. This reordering is shown in Fig. 8A and Fig. 8B. The examples illustrated in Fig. 8A and Fig. 8B only has the regions 1, 2, 3, ..., 18 forming the first code string of Fig. 9 and 19, 20, 21, ..., 35 forming the second code string. Furthermore, in reference to column 14, line 61, Nagai teaches that "one frame is reordered by means of code-row reordering means 15, and the two code strings in a frame are reordered toward the center of the frame in the forward and backward directions from two frame synchronization signals (PSC) between which the frame is sandwiched."

Thus, in Nagai, it can never be the case that a certain portion of the second code string does not have enough room in its frame and, therefore, has to be written after the synchronization signal of the succeeding frame. Would this be the case, i.e. would the synchronization signal raster be too small, then it would be enlarged because it is the very definition of a synchronization signal of the succeeding frame that this synchronization signal occurs after the preceding frame and before the succeeding frame.

In addition to the fact that Nagai does not teach anything in this direction, those skilled in the art would never do such things because this would be clearly against any definition of a frame or a sequence of frames.

The Examiner compares the synchronization signals to the raster points as shown in section 1, line 4 so that the feature that a code word of the second set is distributed over more than one segment because Nagai does not show that one might distribute a code word of the second set over more than one segment, Nagai can not anticipate any one of the features in the last paragraph of Claim 12.

Regarding the last paragraph of Claim 12, the Examiner refers to column 25, line 44 to column 26, line 34. However, the claimed invention is not directed to error

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recovery because the second portion of 7b of the code word 7 is in a further frame, in which the first portion is not located. This is not an erroneous situation, but is a straight-forward normal situation in the claimed invention. Therefore, any error recovery steps as cited by the Examiner cannot anticipate the inventive acquisition of the rest of the code word of the second set.

Furthermore, Claim 12 clearly includes the limitation that the control device jumps to a further segment, which is different from the segment in which the part of the code word of the second set has been found. However, in Nagai any error recovery measures must take place within one and the same frame or "segment" because the Examiner compares the term "segment" to a "frame" in Nagai.

Even when one would interpret the last paragraph of Claim 12 as being a kind of error recovery measure, which is not the case, then Nagai would not have the limitation that the second portion of the code word 7 is taken from a further segment, which is segment 2 in the Fig. 4 example in the subject application.

In view of this, Nagai cannot anticipate or render obvious the subject matter of the claimed invention.

Regarding particular advantages of the claimed invention, note that Nagai only teaches having raster size or segment size that extends over a complete frame. Particularly, the distance between two successive PSC synchronization signals has to be such that the complete first string and the complete second string fit between both synchronization signals.

In accordance with the claimed invention, this is not required. Instead, if a code word of the second set, *i.e.* if a "second code string", does not have enough room

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because the raster point difference selected is smaller than in Fig. 9, then this is no problem for the claimed invention. However, for Nagai, this is not allowed. Therefore, the number of raster points can be increased in the claimed invention compared to that of Nagai or, stated differently, a segment can be selected in the invention to be smaller than the distance between two synchronization signals of succeeding frames in Nagai.

As stated earlier, in the claimed invention the number of raster points is proportional to the robustness of a data stream against transmission errors and, in particular, against sequence errors with code words. Thus, in accordance with the claimed invention, raster points have been selected so close to each other that a code word of the second set has been distributed over more than one segment. Thus, the error robustness of the inventive stream is higher than any error robustness provided by Nagai, which only provides for a raster distance amounting to one frame length, and does not allow any raster distance smaller than one frame because, then, the second code string would not fit between two PSC marks.

Regarding original support for the amendments in the independent claims, please refer to the second paragraph of page 19 having several embodiments for the "predetermined rule" or "predetermined regulation." The encoder-related description also supports the decoder-related description because as stated in the second line of the first paragraph of page 17, the reader for reading the data stream is complementary to the apparatus for producing the data stream. Furthermore, please refer to page 22, second paragraph, lines 15 to 18, regarding a specific description of the second attempt for extracting the code words of the second set, which forms the basis for the amended last paragraph of Claim 12. Also, please refer to page 23, lines 6 to 10, where it is again outlined that the "predetermined regulation" can be arbitrarily selected.

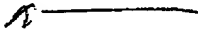
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Should the Examiner find it helpful, he is encouraged to contact Applicant's attorney, Michael A. Glenn, at (650) 474-8400.

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Respectfully submitted,

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